

LSI MegaRAID CacheCade

Product Brief

LSI® MegaRAID® CacheCade™ Pro 2.0 Read/Write Caching Software

Reduce Latency Bottlenecks for Server-based HDD Volumes

KEY BENEFITS

- Accelerates performance of existing HDD arrays with small upfront investment
- Read and Write caching of hot spot data for significant reduction in I/O latency
- Optimized for real-world workloads of transaction-intensive applications
- Uses less space and power compared to adding short-stroked drive spindles and unneeded capacity
- More cost effective than using all SSD storage volumes in storage arrays
- Cached write data protected by non-volatile CacheCade cache pools (RAID 0, 1, 10) and data availability protected by RAID data redundancy
- Simple, intuitive management tools to assign and manage CacheCade SSD pool
- Industry's first read and write controller-based caching on SSDs, dramatically enhancing performance over the previous generation CacheCade software.

Today's workload-intensive business applications are often constrained by the performance limitations of their existing hard disk drives (HDDs). With this type of storage infrastructure already in place, it can be cost prohibitive to switch to a new array based purely on solid state drives (SSDs). Although they are capable of many more transactions per second than HDDs, SSDs have a very high cost per gigabyte and are not suited for heavy, large file workloads. The key to accelerating the performance of existing HDD arrays without making substantial investments in new hardware is to deploy LSI MegaRAID CacheCade software which leverages SSDs in front of HDD volumes to create high-capacity, high-performance controller cache pools.

LSI MegaRAID CacheCade Pro 2.0 read/write software eliminates the need for manually configured hybrid arrays by intelligently and dynamically managing frequently-accessed data and copying it from HDD volumes to a higher performance layer of SSD cache (see figure 1). Copying the most accessed data ('hot spot') to flash cache relieves the primary HDD array from time-consuming transactions which allows for more efficient hard disk operation, reduced latency, and accelerated read and write speeds. This provides significant improvements to overall system performance -- two to twelve times that of HDD-only configurations –for a wide variety of server applications including web, file, online transaction processing (OLTP) database, data mining and other transaction-intensive applications.

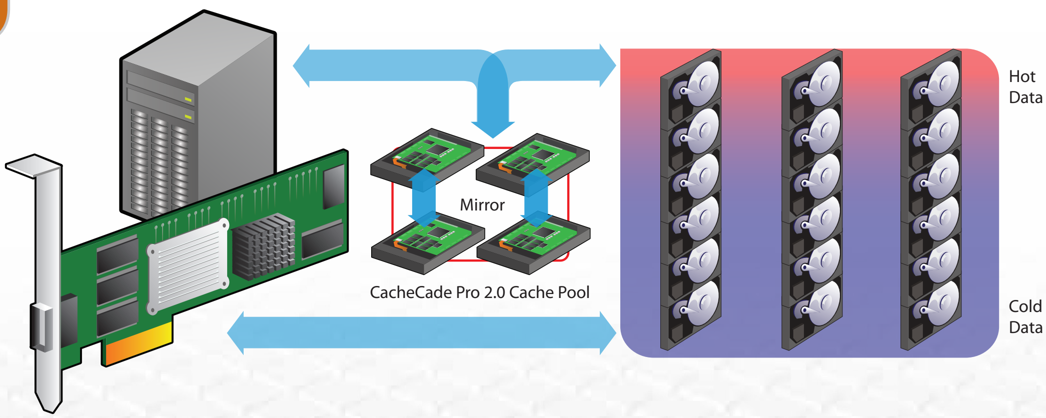


Figure 1: CacheCade Pro 2.0 software intelligently copies hot data to low latency, redundant SSD cache.

Cost Effective Application Acceleration

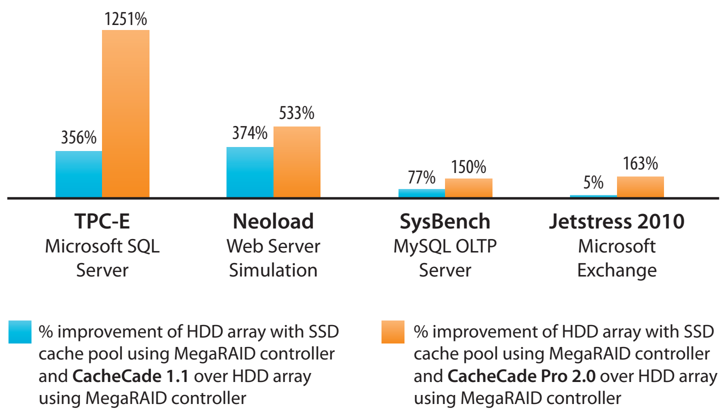
CacheCade Pro 2.0 software offers the perfect combination of HDD capacity and SSD speed. CacheCade Pro 2.0 software is designed to improve the performance of a server's existing drive volume(s) by, dynamically utilizing SSDs as a dedicated pool of RAID controller cache to maximize random read and write performance.

Manual storage management and in-house application tuning costs can be avoided with CacheCade Pro 2.0 software, lowering the total cost of storage ownership for datacenters and small-to-medium businesses.

Application Acceleration Across Business Critical Workloads

CacheCade Pro 2.0 software is the industry's first software solution that offers both read and write controller-based caching on SSDs, dramatically enhancing the performance gains achieved by the previous generation CacheCade software. With the addition of write caching support, read/write-intensive workloads such as Exchange server, high performance computing (HPC) applications, Web 2.0 and other IO-intensive OLTP database system workloads, experience dramatic performance improvements.

CacheCade Makes Applications Faster



LSI MegaRAID CacheCade Pro 2.0 SOFTWARE	
Software License	LSI00293; Compatible with MegaRAID SAS 9260-4i, 9260-8i, 9261-8i, 9260-16i, 9280-4i4e, 9280-8e, 9280-16i4e, 9280-24i4e
Physical Key	LSI00292: Compatible with MegaRAID SAS 9260-4i, 9260-8i, 9260-16i, 9280-4i4e, 9280-16i4e, 9280-24i4e
Operating Systems	All operating systems supported by MegaRAID controller card
Supported SSDs	Please visit www.lsi.com/channel for a complete list of tested SSDs
Max number of SSDs in a CacheCade SSD pool	32
Max number of SSC VD supported per controller	Up to 64 (The total # of HDD VDs plus CacheCade VDs must not exceed 64)
Max CacheCade capacity per controller	512GB

For more information and sales office locations, please visit the LSI web sites at:
lsi.com **lsi.com/channel**